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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,150	10/26/2001	Hung T. Nguyen	01-621	3566

24319 7590 12/10/2004  
LSI LOGIC CORPORATION  
1621 BARBER LANE  
MS: D-106  
MILPITAS, CA 95035

EXAMINER

MEONSKA, TONIA L

ART UNIT	PAPER NUMBER
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2183

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.



**Office Action Summary**

Application No.

10/066,150

Applicant(s)

NGUYEN, HUNG T.

Examiner

Tonia L Meonske

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |



## DETAILED ACTION

### *Drawings*

1. This application lacks formal drawings. The informal drawings filed in this application are acceptable for examination purposes. When the application is allowed, applicant will be required to submit new formal drawings.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 6, 7, 8, 10, 13, 14, 15, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leung et al, US Patent 5,784,603, in view of Arizono US Patent 4,910,664.

4. Claims 2, 9, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leung et al, US Patent 5,784,603, in view of Arizono US Patent 4,910,664, and Bogin et al., US Patent 5,835,435.

5. Claims 4, 11, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leung et al, US Patent 5,784,603, in view of Arizono US Patent 4,910,664, and Chi, US Patent 6,243,807.

6. Claims 5, 12, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leung et al, US Patent 5,784,603, in view of Arizono US Patent 4,910,664, and Tokuume, US Patent 4,965,722.



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7. The rejections are respectfully maintained and incorporated by reference as set forth in the last office action, mailed on June 28, 2004.

***Response to Arguments***

8. Applicant's arguments filed September 27, 2004 have been fully considered but they are not persuasive.

9. On pages 10 and 11, Applicant argues in essence:

*"The Examiner then asserts that Arizono teaches the above-mentioned missing elements of Claim 1. However, a detailed reading reveals that Arizono does not teach this concept. Arizono instead teaches a processor architecture designed to efficiently implement a "while" loop... Nowhere in Arizono is there a teaching or suggestion of the element of "a loop recognizer...that determines whether a loop is present in fetched instructions and reinstates a validity of instructions in said loop and prevents said prefetch circuitry from prefetching instructions outside of said loop until said loop completes processing.""*

However, Arizono has taught a loop recognizer...that determines whether a loop is present in fetched instructions (*Column 3, Lines 10-67, column 5, lines 43-54, A while instruction is determined to be in the fetched instructions and the loop-beginning address register is loaded with the value from the program counter.*) and reinstates a validity of instructions in said loop (*Column 3, Lines 10-67, column 5, lines 43-54, Resetting the prefetch counter to the loop-beginning address reinstates the validity of the prior instructions in the loop.*) and prevents said prefetch circuitry from prefetching instructions outside of said loop until said loop completes processing (*Column 3, Lines 10-67, column 5, lines 43-54, The prefetch counter is reset to the loop-beginning address each time prefetch counter equals the loop-ending address, thereby preventing said prefetch circuitry from prefetching instructions outside of said loop until said loop completes processing.* ). Therefore this argument is moot.



10. On page 11, Applicant argues in essence:

*“Neither reference contains a suggestion that the validity of prefetched instructions can or should ever be reinstated.”*

However, Arizono has in fact taught that the validity of prefetched instructions are reinstated. In Arizono, resetting the prefetch counter to the loop-beginning address reinstates the validity of the prior instructions in the loop that are stored in the loop buffer (Column 3, Lines 10-67, column 5, lines 43-54). Therefore this argument is moot.

### ***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
12. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tonia L Meonske whose telephone number is (571) 272-4170. The examiner can normally be reached on Monday-Friday, 8-4:30.

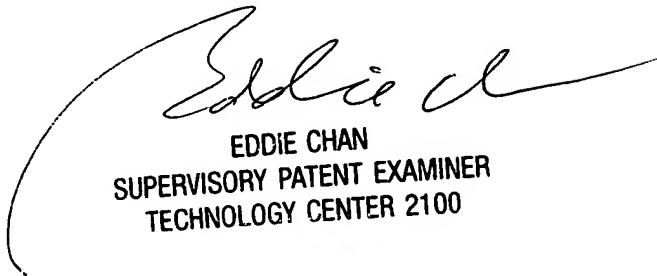


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14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie P Chan can be reached on (571) 272-4162. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tlm



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